

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF HAWAII

STEPHEN ALAN SHULL;	)	Civ. No. 10-00556 BMK
	)	Civ. No. 10-00670 BMK
Plaintiff,	)	Civ. No. 10-00696 BMK
	)	(CONSOLIDATED)
and	)	
	)	FINDINGS OF FACT AND
LIBERTY MUTUAL INSURANCE	)	CONCLUSIONS OF LAW
COMPANY;	)	
	)	
Plaintiff in Intervention,	)	
	)	
SUNSHINE HELICOPTERS, INC.,	)	
	)	
Plaintiff,	)	
	)	
UNITED STATES AVIATION	)	
UNDERWRITERS, INC.	)	
	)	
Plaintiff,	)	
	)	
vs.	)	
	)	
UNITED STATES OF AMERICA,	)	
	)	
Defendant.	)	
_____	)	

FINDINGS OF FACT AND CONCLUSIONS OF LAW

This case stems from the crash of a Eurocopter AS350FX helicopter, registration number N87EW (“7 Echo Whiskey”), on the island of Maui on December 16, 2009. The crash occurred after the helicopter’s engine quit in flight

during a commercial pilot competency check ride conducted pursuant to 14 C.F.R. § 135.293. On board the helicopter at the time of the crash were the pilot, Stephen Shull (“Shull”), and an Air Safety Inspector employed by the Federal Aviation Administration (“FAA”), Donald Andera (“Andera”). Both were injured in the crash and the helicopter was destroyed.

As a result of the crash, Plaintiffs Sunshine Helicopters, Inc. (“Sunshine”), the owner and operator of the accident helicopter; United States Aviation Underwriters; and Liberty Mutual Insurance Company (“collectively, Plaintiffs”) brought suits against the United States under the Federal Tort Claims Act (“FTCA”) seeking property loss and business loss damages.<sup>1</sup> Plaintiffs allege that Andera caused the engine failure by mishandling the helicopter’s fuel control lever (“FCL”) when initiating a simulated engine failure maneuver. Plaintiffs further allege that Andera caused the accident by initiating the maneuver in an area without a suitable landing spot. As discussed below, the Court enters judgment in favor of the United States because Andera’s conduct was not a

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<sup>1</sup> Shull and Andera were also parties to this litigation, but settled their claims. Shull filed a complaint against the United States. Andera intervened, and filed a complaint against Sunshine, Shull, and Precision Fuel Components LLC (“Precision”). Precision filed a motion to dismiss the complaint in intervention for lack of personal jurisdiction, and that motion was granted. Andera and Shull settled their claims against the remaining defendants. Plaintiffs’ claims against the United States are the only remaining claims in this case.

substantial factor in the cause of the crash, and he administered the check ride in a suitable location.

### FINDINGS OF FACT

Under the applicable federal regulations, commercial pilots must undergo annual competency checks. 14 C.F.R. § 135.293. Part of the competency check involves a simulated engine failure. During this maneuver, the inspector announces “simulated engine failure,” the pilot lowers the helicopter’s collective,<sup>2</sup> and the inspector lowers the FCL, which is a lever that supplies power to the engine. This allows the helicopter to enter autorotation, which occurs when air passes up through the rotor blades and turns the blades without influence from the engine. The simulated engine failure tests the pilot’s ability to set up an autorotation and guide the aircraft to a safe landing area in the event of an actual engine failure.

Both Andera and Shull are highly experienced helicopter pilots. On December 16, 2009, Andera briefed Shull on the flight in question. Shull then conducted a preflight inspection of the helicopter. Prior to their departure, Shull

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<sup>2</sup> The collective changes the pitch of the blades, which provides lift to the helicopter.

and another Sunshine pilot told Andera that the FCL was “touchy,” and to be careful when handling it.

Andera and Shull departed on 7 Echo Whiskey from Kahului airport towards Hana airport. Shull eventually piloted 7 Echo Whiskey to the area where they performed the simulated engine failure maneuver. Before initiating the simulated engine failure, Andera waited until the helicopter was near open fields of pasture land suitable for an emergency landing. The pasture land was located into the wind and on Shull’s side (the right side) of the helicopter. The pasture land was closer than the crash area, and was visible to Shull at the time they started the simulated engine failure. The United States introduced photographs of the pasture land that depict large open fields and confirm the expert testimony presented by the defense that the area was suitable for an emergency landing.<sup>3</sup>

Andera announced simulated engine failure, and Shull lowered the collective and looked for a landing spot. Andera then looked at the FCL and lowered it. Andera testified that he moved the FCL only slightly out of the flight gate. He did not touch the FCL again until they were on the ground.

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<sup>3</sup> Andera and Shull dispute whether 7 Echo Whiskey had turned left and was facing Hana Airport rather than the pasture land when Andera announced simulated engine failure. Regardless of whether 7 Echo Whiskey had turned left, the Court finds that the pasture land was suitable for an emergency landing because Shull could have turned into the wind toward the pasture land.

Shull did not turn towards the landing area that Andera intended to use, and instead headed toward Hana Airport.<sup>4</sup> Andera asked Shull whether the engine had quit, and Shull responded that it had. Shull then attempted to restart the aircraft. Shull testified that the FCL was “out of the flight gate and just back a bit,” and he pulled the FCL “all the way back” to try to restart the helicopter. The restart attempt failed, however.

At trial, the following relevant facts and testimony were adduced regarding the cause of the crash. Prior to the crash, 7 Echo Whiskey’s engine had inadvertently shutdown on Sunshine pilots four times. Those shutdowns occurred when the helicopter was on the ground, and three of them occurred when pilots were bringing the FCL back during the cool down of the helicopter. The shutdowns were indicative of a problem with 7 Echo Whiskey’s fuel control unit because the engine should only shutdown when the FCL enters the cutoff detent. Moreover, three of those shutdowns were not documented as required by the Federal Aviation Regulations, Sunshine’s own policies, and the aircraft flight manual.

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<sup>4</sup> Although Shull testified that he asked Andera whether he had a landing spot and Andera responded that he did not, Shull did not tell investigators this when interviewed and Andera does not recall that exchange. The Court does not credit this testimony.

Donald Hamill testified as an expert in engine controls, and has extensive experience in investigating aircraft engines. Hamill tested the fuel control system, and his test confirmed that the fuel control system was “miscalibrated” and “this fuel control will result in premature cutoff.” Specifically, the miscalibration of 7 Echo Whiskey’s fuel control unit caused the fuel flow rates of the engine to be too low, which caused inadvertent shutdowns. Hamill testified that 7 Echo Whiskey’s engine was “in jeopardy all the time, especially right down at the bottom.” If the fuel control system is calibrated properly, the engine should only shut off when the FCL is in the cutoff detent.<sup>5</sup> Hamill’s testing indicated that the prior shutdowns were symptoms of 7 Echo Whiskey’s miscalibrated fuel control system.

Hamill believed that the engine became miscalibrated during the last overhaul by Precision. He opined that the miscalibrated fuel control caused “the engine to be unable to sustain power” during the simulated engine failure maneuver on the day of the crash. He was unsure of whether Andera brought the FCL too far back, but opined that “if the fuel control is proper, it doesn’t matter . . .

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<sup>5</sup> Hamill testified that in a properly functioning helicopter, a pilot could hang the FCL on the cutoff detent and the engine will still supply fuel, but “it is lower than . . . min fuel flow” and “anytime you go below min fuel flow position, you run the risk of flaming out the engine.” Although Hamill’s testimony could imply that engine failures can occur when the FCL is outside the cutoff detent, the Court credits his more unequivocal opinion that the engine should only shut down when the FCL is in the cutoff detent.

. If he slams it back -- what we call slam decel or slam accel, as long as that fuel control is within limits, it will not flame out.” The Court credits Hamill’s opinion, and finds that the miscalibrated fuel control unit led to an inadvertent engine shutdown when the FCL was moved aft.

In addition to the miscalibrated fuel control unit, Sunshine’s failure to investigate the prior inadvertent shutdowns also contributed to the cause of the crash. Sunshine pilots were aware that 7 Echo Whiskey had inadvertently shutdown numerous times before the accident, and failed to investigate the cause of those shutdowns. Instead, Sunshine pilots learned to “milk the throttle” to avoid inadvertent shutdowns. Joel Collins, Sunshine’s director of maintenance, testified in his deposition that he was unaware that 7 Echo Whiskey’s engine had inadvertently shut down, and that the prior shutdowns made the aircraft unairworthy. The prior shutdowns indicated that 7 Echo Whiskey had a serious problem, but Sunshine never investigated. The Court finds that Sunshine’s failure to investigate the prior shutdowns also contributed to the cause of the crash because a diligent investigation likely would have revealed 7 Echo Whiskey’s miscalibrated fuel control unit.

## CONCLUSIONS OF LAW

Under the FTCA, the United States “shall be liable, respecting the provisions of this title relating to tort claims, in the same manner and to the same extent as a private individual under like circumstances . . . .” 28 U.S.C. § 2674.

To prevail on a claim of negligence against the United States, Plaintiffs must prove “all four of the necessary elements of negligence: (1) duty; (2) breach of duty; (3) causation; and (4) damages.” Cho v. State, 168 P.3d 17, 23 n.11 (Haw. 2007).

Andera is an employee of the United States, and therefore the United States is responsible for his actions. Hawaii law imposes “a duty owed by all persons to refrain from taking actions that might foreseeably cause harm to others.”

Taylor-Rice v. State, 979 P.2d 1086, 1097 (Haw. 1999). With respect to flight inspectors, the Fifth Circuit held that Texas law, which is similar to Hawaii’s law on this point, “clearly imposes a duty on the inspector or designated examiner in charge of a flight test to conduct a test with due care for the safety of those operating the aircraft under his direction.” Hayes v. United States, 899 F.2d 438, 444 (5th Cir. 1990) (footnote omitted). Thus, Andera had a duty to perform the check ride with due care for the safety of Shull and the helicopter.

A. Andera's Lowering of the FCL Did Not Proximately Cause the Crash.

Although Plaintiffs assert that Andera failed to monitor Ng,<sup>6</sup> the Plaintiffs did not produce any evidence that Andera moved the FCL in a negligent manner. The Court can infer that Andera failed to monitor the Ng gauge when moving the FCL because he was looking at the FCL rather than the Ng gauge when he moved it. However, there is no evidence that Andera's manipulation of the FCL caused Ng to fall below sixty seven percent. Shull testified that he did not see the Ng gauge. Andera testified that he moved the FCL slightly out of the flight gate. Shull testified that when he attempted the restart, the FCL was out of the flight gate and "back a bit." Plaintiffs have not shown that Andera moved the FCL in a manner that could have reasonably caused Ng to drop below sixty seven percent. Thus, Plaintiffs' theory that Andera moved the FCL in a negligent manner fails.

Even assuming that Andera had moved the FCL in a manner that caused Ng to drop below sixty seven percent, his actions did not proximately cause the crash. Hawaii courts have held that a person's actions are the proximate or legal cause of harm to another "if (a) his [or her] conduct is a substantial factor in bringing about the harm, and (b) there is no rule of law relieving the actor from

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<sup>6</sup> The Ng gauge of the helicopter monitors the speed of the engine. The Rotorcraft Flight Manual ("RFM") states that Ng should not drop below sixty seven percent during autorotation training.

liability because of the manner in which his [or her] negligence has resulted in the harm.” Estate of Klink ex rel. Klink v. State, 152 P.3d 504, 533 (Haw. 2007) (quoting Taylor–Rice, 979 P.2d at 1100).

Andera did not proximately cause the crash because the engine should not have shut down when he moved the FCL slightly back from the flight gate. The Court concludes, based in large part on Hamill’s testimony, that 7 Echo Whiskey should only have shutdown when the FCL entered the cutoff detent, and that the miscalibrated fuel control unit led to an inadvertent engine failure.

The prior inadvertent shut downs also indicate that Sunshine knew 7 Echo Whiskey had mechanical problems, but failed to investigate. The testimony adduced at trial indicates that Sunshine did not effectively investigate the cause of the inadvertent engine failures. Joseph Rough, an expert in the operation and maintenance of EuroCopter AS350 helicopters (the same type as 7 Echo Whiskey), testified that a single flame out was serious, and that Sunshine should have investigated the cause of the engine failures. As Rough testified, 7 Echo Whiskey was “talkin’ and nobody’s listening.” The miscalibrated fuel unit and Sunshine’s failure to investigate and adequately address this problem were the substantial factors in the cause of the crash.

B. Andera Performed the Simulated Engine Failure In a Suitable Area.

Part of Andera's duty to conduct the check ride in a safe manner undoubtedly includes the duty to perform the simulated engine failure in a suitable location. Stephen Sullivan, an expert in helicopter flight and operations, opined that the Practical Test Standards provide the procedure for autorotation training and state that "[s]imulated power failure at altitude must be given over areas where actual touchdowns can safely be completed in the event of an actual powerplant failure." (Ex. 10.) Although some witnesses testified that Andera was required to have an area suitable for a running landing,<sup>7</sup> the Court concludes that Andera was only required to initiate the simulated engine failure in an area where the pilot could perform a safe emergency landing.

Andera testified that he waited until they got close to pasture land before initiating the simulated engine failure. Photographs of this pasture land, in evidence, show that the area is relatively flat and clear of trees. Regardless of whether 7 Echo Whiskey turned left just prior to the initiation of the simulated

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<sup>7</sup> Pilots perform a running landing by letting the helicopter slide forward upon touchdown. Running landings are used during training to ease the stress on the aircraft and eliminate common mistakes like hitting the helicopter's tail on the ground prior to landing. During an actual emergency landing, a pilot would attempt to stop all forward speed before touching down rather than attempting a running landing.

engine failure, the open pasture land was close and was a suitable area for an emergency landing.

Additionally, both Andera and Shull testified that when doing an autorotation, landing into the wind cushions the helicopter's landing. The open pasture land was located into the wind, making it even more suitable for an emergency landing.

### CONCLUSION

For the foregoing reasons, the Court concludes that Plaintiffs are not entitled to relief under the FTCA. The Clerk of Court is directed to enter judgment in favor of the United States.

DATED: Honolulu, Hawaii, April 26, 2012.

IT IS SO ORDERED.



/s/ Barry M. Kurren  
Barry M. Kurren  
United States Magistrate Judge

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(CONSOLIDATED); FINDINGS OF FACT AND CONCLUSIONS OF LAW